**Lat 39.86676 and Lon -120.16815**

# Forest Health Protection
## Pacific Southwest Region

Date: September 20, 2013

File Code: 3420

To: District Ranger, Beckwourth Ranger District, Plumas National Forest

Subject: Chilcoot Campground Hazard Tree Evaluation (FHP Report NE13-07)

On July 31, Lisa Sedlacek (District Assistant Resource Officer), Debra Fryberger-Eby (District Resource Officer), Deb Bumpus (District Ranger) and Bill Woodruff (FHP Plant Pathologist) surveyed Chilcoot Campground for tree defects. The three to four hour survey identified tree defects and hazard trees on a campground map. Only campsites which appeared to have hazardous trees, when viewed from the access roads, were examined closely for tree hazards. Cottonwood (CW) trees were of particular concern but all suspected hazard trees or tree hazards were recorded. Findings were recorded on a large-scale map of the campground by Sedlacek. On August 13 Woodruff returned to examine the decay in a leaning cottonwood tree.

Chilcoot CG (Lat: 39.867, Lon: -120.168, elevation: 5120') is mostly in a riparian area on the east side of Little Last Chance Creek two miles southeast of Frenchman Lake. The campground is a Forest Service, concessionaire-managed facility with approximately 37 campsites. It is well stocked with old and young Jeffrey pine (JP), black cottonwood (CW), incense cedar and Douglas-fir. The cottonwood trees in Chilcoot CG are a valued ecosystem component of the riparian area in which this campground is situated. One management objective for Chilcoot CG is to retain cottonwood trees that are not hazardous. The District Ranger is available to review suspected hazard trees, before they are designated for removal.

All trees were not examined. Only trees with obvious defects were examined; and those considered to be dangerous were identified for immediate treatment. Trees or defects considered to be low risk were noted by campsite on the map for monitoring and/or future treatment.

At least two large JP with defects were discussed. One of these had two dead tops (Figure 1) and the other had a swollen crook and was leaning towards a much-used stretch of Little Last Chance Creek (Figure 2). The latter is planned to be felled. Because dead pine tops are usually not decayed, the dead topped pine is of lesser concern; but it would be safest to remove the dead tops by a professional tree service. Except for the presence of dead branches in the lower crowns of a number of large JP trees (Figures 3 and 4), most conifers in the campground appeared sound. The number of JP trees needing branch pruning in each campsite were noted on the campground map. No sign of root disease was found in the conifers; however root disease and decay is generally hidden underground and impossible to detect without an accompanying decline in the

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Figure 1. JP with dead tops.

Figure 2. JP leaning towards creek (arrow points to swollen crook)

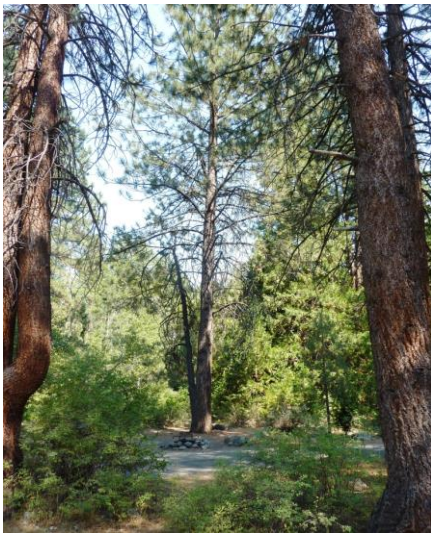

Figure 3. JP with overhead dead branches

Figure 4. JP with overhead dead branches

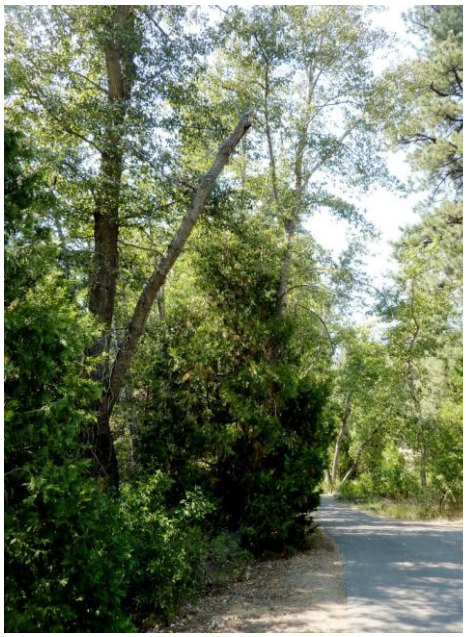

Figure 5. Dead CW tree leaning over road.





health of the foliage or the presence of nearby uprooted (blowdown) trees. Many CW trees in Chilcoot CG are defective. Defects include dead trees, pronounced lean, dead branches, fire scars, damaged roots, hollow branch stubs, basal scars with hollow butts, dead forks, advanced decay anywhere in the bole or large branches, declining crown foliage, root decay, etc. Defective cottonwoods without targets (e.g. tent pad, fire ring, picnic table, parking area, road, etc.) are considered to be low risk.

CW trees with suspected butt rot within striking distance of targets were drilled with a Resistograph (instrument

which can detect decay in wood). When serious decay was measured with the Resistograph in a CW tree with visible butt rot, the tree was identified for removal on the campground map. In addition to CW trees with serious butt rot, dead CW trees (Figure 5) were identified on the map for removal. Campsites with high risk hazard trees which cannot be removed or mitigated immediately were closed. Chilcoot CG was close for the season just after Labor Day. The campground concessionaire will hire a professional tree service to remove or prune the identified hazard trees before the campground opens in 2014. It is recommended that the Forest Service collaborate with the concessionaire and the tree service to determine the safety of CW trees with visible or suspected defects. Prior to opening this (and all) campgrounds, managers should resurvey for new tree hazards and to reevaluate "monitor trees".

Campsites 13 and 14 had six or more large cottonwoods (Figure 6) with declining crowns and dead branches, each within striking distance of several targets. These CW trees appeared to have sound butts; however some appeared to have decay in the upper boles. The lack of foliage in the crowns of these trees suggests that advanced decay may be present in the roots and/or boles of these trees. Without expert inspection by a licensed professional, the stability of these trees is uncertain. Campsites 13 and 14 were promptly closed for the season.

**Figure 6. Declining CW trees in Campsites 13 and 14.**

A campsite adjacent to the highway and east of campsite #14 has two large CW trees with excessive lean (Figures 7 and 8). Both trees are leaning over potential tent sites. Both trees were drilled with the Resistograph. The CW nearest the highway (Figure 7) had exposed and damaged roots and excessive decay in the butt and was designated on the map for removal. The other CW (Figure 8) appears sound; but its excessive lean is cause for concern. If retained, campers should be instructed on the danger associated with camping under this tree. Preferably, the impact area under this CW would be fenced or otherwise designated as a "no camping area".

**Figure 7. CW with decaying butt and damaged roots leaning over tent site..**

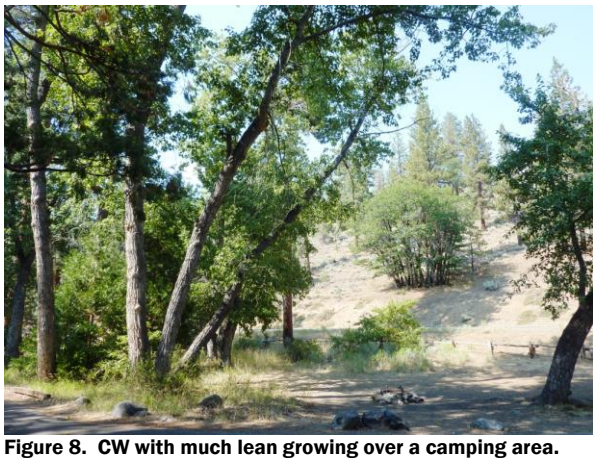

**Figure 8. CW with much lean growing over a camping area.**

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On August 13, Woodruff used a ladder to access decay ten feet above ground in a large CW tree (Figure 9) in the northernmost campsite in Chilcoot CG. The entire tree is growing with a pronounced lean over the campsite. The lean is significant yet it appears to have begun a very long time ago. The tree was checked with the Resistograph near the ground on July 31 and no significant decay was detected. However on August 13 significant decay was found at a large severed branch (Figure 10) ten feet above ground. This decay seems to be limited to less than 25% of the cross section; but since a large and heavy portion of the bole above this defect is growing at a significant angle over the campsite, there is cause for concern. A second severed branch higher up the bole appears to also be decaying. Further investigation by a licenced professional tree service is recommended. This tree does not appear to be an imminent danger to visitors, but until this tree is examined by a licensed tree inspector, this conclusion is questionable. At a minimum, this tree should be carefully monitored to promptly identify changes in tree vigor; or signs that the various bole decays have become excessive.

Figure 9 CW with decay in bole growing over campsite.

Figure 10. Decay in CW bole at a severed branch.

All CW trees with defects, including poor vigor, should be monitored to detect changes in health or decay which would make them unsafe. Hazardous CW (and conifer) trees should be removed or mitigated upon identification. Questionably hazardous trees should be closely monitored. To help insure that the future tree component in a campground will meet management expectations, a vegetation management plan should be prepared for each Forest Service campground. Recreation specialist should collaborate with a silviculturist in planning and growing campground forests.

Although not previously discussed, soil compaction around campgrounds trees should be minimized. Soil compaction can stress trees and make them vulnerable to insect attack and decay. Healthy CW trees (Figure 11) in Chilcoot CG (as well as conifers) should be protected from soil compaction and damage to the bole which could allow decay organisms to infect the wood. Removing overstory trees and limiting soil compaction can enhance the growth and reproduction of CW trees in Chilcoot CG.

Figure 11. Healthy-looking CW tree.

For further assistance, contact Bill Woodruff at 530-252-6680. Please involve him at the time the tree service is

working in Chilcoot CG in order for him to learn more about CW tree management in recreation areas.

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